

Final

Western Nevada County

8-Hour Ozone

**Regional Emissions Analysis for the
Dorsey Drive Interchange and
Squirrel Creek Bridge Projects**

This report was prepared by the Nevada County Transportation Commission in coordination with Caltrans District 3
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EXECUTIVE SUMMARY

Background

Western Nevada County is designated as an isolated rural non-attainment area, under the classification of subpart 1 (basic), for the 8-hour ozone National Ambient Air Quality Standards (NAAQS), effective June 15, 2004. Isolated rural non-attainment areas are required to demonstrate air quality conformity when federal approval is required on a regionally significant non-exempt transportation project. A regional emission analysis must show that the project, in addition to the other regionally significant federal and non-federal transportation projects, do not create new violations of the NAAQS, increase the severity of NAAQS, or delay timely attainment.

Ozone is a secondary pollutant generated by chemical reactions in the atmosphere involving reactive organic gases (ROG) and Nitrogen Oxides (NOx). Ozone is unhealthy to breathe, especially for people with respiratory illnesses and for children and adults who are active outdoors. The U.S. Environmental Protection Agency's (EPA) non-attainment designation of western Nevada County with the classification of subpart 1 (basic) was in recognition of the fact that the cause of ozone violations of the 8-hour NAAQS occur primarily from the transport of pollutants generated in the Sacramento Valley and the San Francisco Bay area.

The first transportation projects requiring an air quality conformity determination in relation to 8-hour ozone NAAQS are the Dorsey Drive Interchange project and the Squirrel Creek Bridge project. Caltrans District 3 and the Nevada County Transportation Commission (NCTC) are the Lead Agencies for the associated air quality planning and regional emissions analyses for the Dorsey Drive Interchange project and Squirrel Creek Bridge project.

The California Department of Transportation (Caltrans) and the Federal Highway Administration (FHWA), in cooperation with the Nevada County Transportation Commission (NCTC), and the City of Grass Valley propose to convert the Dorsey Drive Overcrossing to a tight diamond interchange and connect it with State Route (SR) 20/49. This report presents the Dorsey Drive Interchange Conformity Analysis for Federal approval of the Dorsey Drive Interchange project located at approximately KP R21.9 (PM R13.6) adjacent to SR 20/49 within the City of Grass Valley.

The County of Nevada proposes to replace an existing 20 foot long one lane bridge/box culvert over Squirrel Creek located on Valley Drive with a two-lane 40 foot structure to alleviate roadway flooding, enhance roadway safety, and to accommodate emergency vehicles. The project is not located on a regionally significant roadway and the roadway approaches will remain two lanes. Due to the fact that this bridge project proposes to add an additional travel lane it requires a conformity determination. This project will be completed and open to traffic in 2008.

The initial *Draft Western Nevada County 8-Hour Ozone Regional Emissions Analysis for the Dorsey Drive Interchange and Squirrel Creek Bridge Projects* was circulated for review and comment July 19, 2006 through August 17, 2006. During review of the emissions analysis, which utilized the "Build/No-Build" test, an input error was identified in the *Emissions Factor (EMFAC)* modeling, and as a result the 2018 "build scenario" needed to be re-calculated. After correcting the error it was determined that the emissions in 2018 were close to the Build/No-Build test thresholds. Therefore, in accordance with Federal guidelines which allow the use of either of two emissions comparison tests, the alternative "No-Greater-than-2002" test was

utilized to determine whether or not western Nevada County would be in conformance with the required emission standards. This test demonstrated that the emissions from the proposed projects and the regionally significant federal and non-federal transportation projects are in conformance with the required federal standards.

Because the emissions analysis was revised to reflect the results of the alternative “No-Greater-than-2002” test, it was necessary to open a new thirty-day public comment period. The public comment period for the revised document began on September 2, 2006 and ended October 4, 2006. A public hearing on the revised regional emissions analysis was noticed and held on September 20, 2006 at the regularly scheduled NCTC Meeting. No comments were received at the hearing or during the thirty-day comment period.

The *Revised Draft Western Nevada County 8-Hour Ozone Regional Emissions Analysis for the Dorsey Drive Interchange and Squirrel Creek Bridge Projects* demonstrates that the two projects, do not create any new violations of the National Ambient Air Quality Standards (NAAQS), increase the severity of NAAQS, or delay timely attainment.

The regional emissions analysis contained herein demonstrate that the criteria specified in the Federal Transportation Conformity Rule have been met.

Summarized below are the applicable Federal criteria or requirements for a conformity determination, the conformity tests applied, and an overview of the organization of this report.

Conformity Requirements

Section 93.109(d) of the Conformity Rule addresses regional conformity tests in 8-hour ozone areas that do not have 1-hour ozone State Implementation Plans (SIPs). The Conformity Rule indicates that “basic” 8-hour ozone areas without adequate or approved budgets must use either the No-Greater-than-2002 baseline year test or the action/baseline (build/no-build) test for 8-hour conformity. Passing either of these two tests fulfills the regional emissions analysis requirements for the 8-hour ozone standard when an 8-hour budget is not yet established.

The Western Nevada County Non-Attainment Area, as an isolated rural area, is not required to maintain conformity with a Metropolitan Transportation Plan and Transportation Improvement Program (TIP), and whose projects are not part of the emission analysis of any Metropolitan Planning Organizations (MPOs) metropolitan transportation plan or TIP Section 93.109(1).

In accordance with the Conformity Rule, the interagency consultation process is being used for conducting regional emissions analyses and demonstrating conformity for the 8-hour ozone standard. An interagency coordination process outlining the responsibilities of the multiple agencies involved was developed to ensure the coordination of transportation planning and air quality conformity efforts and compliance with Federal and State Clean Air Act requirements. Through this process the Western Nevada County Conformity Working Group was established. This group is made up of representatives from the NCTC, the Northern Sierra Air Quality Management District (NSAQMD), Caltrans, the California Air Resources Board (CARB), EPA, FHWA, and the Federal Transit Administration (FTA).

After reviewing the submitted regional emissions analysis for compliance with the Conformity Rule requirements, the decision on the final determination of conformity is the responsibility of the FHWA and FTA.

Federal Conformity Requirements

The Federal Transportation Conformity Rule (40 Code of Federal Regulations (CFR) Parts 51 and 93) specifies the criteria and procedures for conformity determinations for transportation plans, programs, and projects and their respective amendments. The Federal Transportation Conformity Rule was first promulgated in 1993 by the EPA, following passage of amendments to the Federal Clean Air Act in 1990. The Federal Transportation Conformity Rule has been revised several times since its initial release to reflect both EPA rule changes and court opinions.

The Conformity Rule applies nationwide to “all non-attainment and maintenance areas for transportation-related criteria pollutants for which the area is designated non-attainment or has a maintenance plan” (40 CFR 93.102). Currently, western Nevada County is designated as a non-attainment area with respect to the Federal air quality standards for only one criteria pollutant: 8-hour ozone.

Under the Federal Transportation Conformity Rule, the principal criteria for a determination of conformity for a regionally significant project subject to conformity are as follows:

- ◆ Employment of the latest planning assumptions and emission models specified for use in conformity determinations
- ◆ Regional emissions test
- ◆ Interagency consultation
- ◆ Meet criteria found in 40 CFR Part 93

Consultation generally occurs: at the beginning of the conformity analysis process; on the proposed models; associated methods and assumptions for the upcoming analysis and the project to be assessed; and at the end of the process on the draft Conformity Analysis report.

To ensure complete documentation under the Federal Transportation Conformity Rule, FHWA has developed a Conformity Checklist (Appendix “A”).

Conformity Tests

Under the existing Conformity Rule, regional emissions analyses for ozone areas must address the ROG and NO_x, which are both ozone precursors.

The conformity tests specified in the Federal Transportation Conformity Rule, basic non-attainment areas without 8-hour ozone budgets or previous 1-hour budgets can use either the No-Greater-than-2002 baseline year test or action/baseline test (40 CFR 93.109 (d)). The test method that was used was the No-Greater-than-2002 test. This test demonstrates that for each analysis year modeled that the ozone precursor emissions associated with the transportation project(s) are not greater than the 2002 ozone precursor emissions.

Conformity Analysis Results

A regional emissions analysis was conducted for analysis years 2008, 2018, and 2027 for the pollutant ozone and the precursors ROG and NO_x. All analyses were conducted using the latest planning assumptions and emissions models. For the No-Greater-than-2002 test, the Dorsey Drive Interchange project is assumed in the 2018 and 2027 test scenarios. Based on the planned phased construction of the Dorsey Drive Interchange, the 2018 test scenario assumes that only the southbound onramp to SR 20/49 is constructed and open to traffic. The 2027 test scenario

assumes the entire Dorsey Drive Interchange will be constructed and open to traffic. The major conclusions of the Dorsey Drive Interchange Regional Emissions Analysis are:

For ozone, the total ROG and NOx emissions associated with implementation of the Dorsey Drive Interchange project for all of the years tested (2008, 2018, and 2027), passed the No-Greater-than-2002 test.

- ◆ An emissions budget has not been established; therefore the No-Greater-than-2002 test was conducted and passed for ozone precursor emissions in relation to the Dorsey Drive Interchange. The emissions analysis was performed using the latest planning assumptions and emission model.
- ◆ Since western Nevada County Interagency Consultation Procedures have not been approved by EPA, consultation has been conducted in accordance with Federal requirements, by following the Draft Interagency Consultation Procedures that have been developed this effort satisfies all the parties in the Western Nevada County Conformity Working Group.
- ◆ Consultation has been conducted in accordance with Federal requirements.

After reviewing the scope and location of the **Squirrel Creek Bridge Project** at Valley Drive, the Western Nevada County Conformity Working Group made the determination that the project is not located on a regionally significant roadway and therefore per 40 CFR 122(a)(1) this project is not required to be explicitly modeled and the vehicle miles traveled (VMT) from the project have been estimated in accordance with reasonable professional practice. Per 40 CFR 93.119(g)(2), the transportation projects and planning assumptions in the “Action” and “Baseline” scenarios are exactly the same for all possible analysis years, and consequently, the emissions predicted in the “Action” scenario are not greater than the emissions predicted in the “Baseline” scenario. Therefore, this project satisfies the Conformity Rule requirements without additional regional emissions analysis.

Report Organization

Executive Summary provides an overview of the information presented in the conformity analysis.

Chapter I describes the non-attainment status of western Nevada County, associated project descriptions, applicable Federal and State Conformity Rules and requirements, air quality implementation plans, and conformity test requirements.

Chapter II contains a discussion of the latest planning assumptions, including a summary of the transportation model characteristics, key socio-economic data, and other data related to the land use and transportation systems forecasts.

Chapter III describes the air quality modeling used to estimate emission factors and mobile source emissions, and summarizes the regional emissions test results.

Chapter IV provides an overview of the interagency requirements and compliance.

Appendices include consultation documentation and other related information.

CHAPTER 1

CONFORMITY REQUIREMENTS

Non-Attainment Designation

On June 15, 2004, western Nevada County was designated as an isolated rural non-attainment area, under the classification of subpart 1 (basic), for the 8-hour ozone National Ambient Air Quality Standards (NAAQS). The western Nevada County non-attainment area is identified as the portion of Nevada County, which lies west of a line, described as follows: beginning at the Nevada/Placer County boundary and running north along the western boundaries of Sections 24, 13, 12, 1, Township 17 North, Range 14 East, Mount Diablo Base and Meridian, and Sections 36, 25, 24, 13, 12, Township 18 North, Range 14 East to the Nevada/Sierra County boundary. Western Nevada County is attainment/unclassified for carbon monoxide (CO), particulate matter of 10 microns or smaller (PM₁₀) and particulate matter of 2.5 microns or smaller (PM_{2.5}).

Isolated rural non-attainment areas are required to demonstrate air quality conformity when a federal approval is required on a regionally significant non-exempt transportation project. The conformity analysis must show that the project, in addition to the other regionally significant federal and non-federal transportation projects, do not create new violations of the NAAQS, increase the severity of NAAQS, or delay timely attainment.

Caltrans District 3 and the Nevada County Transportation Commission (NCTC) are the Lead Agencies for the associated air quality planning and regional emissions analyses for the Dorsey Drive Interchange project and Squirrel Creek Bridge project.

Ozone

Ozone is a secondary pollutant generated by chemical reactions in the atmosphere involving reactive organic gases (ROG) and Nitrogen Oxides (NO_x). Ozone is unhealthy to breathe, especially for people with respiratory illnesses and for children and adults who are active outdoors. The U.S. Environmental Protection Agency's (EPA) non-attainment designation of western Nevada County with the classification of subpart 1 (basic) was in recognition of the fact that the cause of ozone violations of the 8-hour NAAQS occur primarily from the transport of pollutants generated in the Sacramento Valley and the San Francisco Bay area.

The first transportation projects requiring an air quality conformity determination in relation to 8-hour ozone NAAQS are the Dorsey Drive Interchange project and the Squirrel Creek Bridge project. Through interagency consultation it was determined that these projects will not cause or contribute to any new localized PM or CO violations.

Dorsey Drive Interchange Project

The California Department of Transportation (Caltrans) and the Federal Highway Administration (FHWA), in cooperation with the NCTC, and the City of Grass Valley propose to convert the Dorsey Drive Overcrossing to a tight diamond interchange and connect it with State Route (SR) 20/49. This report presents the Dorsey Drive Interchange Conformity Analysis for federal approval of the Dorsey Drive Interchange project located at approximately KP R21.9 (PM R13.6) adjacent to SR 20/49 within the City of Grass Valley.

Squirrel Creek Bridge Project

The County of Nevada proposes to replace an existing 20 foot long one lane bridge/box culvert located on Valley Drive with a two-lane 40 foot structure to alleviate roadway flooding, enhance roadway safety, and to accommodate emergency vehicles. The project is not located on a regionally significant roadway and the roadway approaches will remain two lanes. Due to the fact that this bridge project proposes to add an additional travel lane it requires a conformity determination. This project will be completed and open to traffic in 2008.

The County of Nevada's Highway Bridge Rehabilitation and Replacement Program (HPRRP) projects were reviewed in relation to air quality conformity as part of the March 20, 2006 Western Nevada County Conformity Working Group meeting.

After reviewing the scope and location of the Squirrel Creek Bridge Project at Valley Drive, the Western Nevada County Conformity Working Group made the determination that the project is not located on a regionally significant roadway and therefore per title 40 of the Code of Federal Regulations (CFR), section 122(a)(1) this project is not required to be explicitly modeled and the vehicle miles traveled (VMT) from the project have been estimated in accordance with reasonable professional practice. Per 40 CFR 93.119(g)(2), the transportation projects and planning assumptions in the "Action" and "Baseline" scenarios are exactly the same for all possible analysis years, and consequently, the emissions predicted in the "Action" scenario are not greater than the emissions predicted in the "Baseline" scenario for such analysis years. Therefore, this project satisfies the Conformity Rule requirements without additional regional emissions analysis.

Federal Conformity Rule

The EPA issued a Final Rule on July 1, 2004, that amended the Transportation Conformity Rule to include criteria and procedures for the new 8-hour ozone standard. The EPA's non-attainment area designations for the new 8-hour ozone standard became effective on June 15, 2004, for most areas. Conformity for a given pollutant and standard applies one (1) year after the effective date of EPA's initial non-attainment designation. Therefore, conformity for the 8-hour ozone standard will begin to apply on June 15, 2005.

In accordance with the Conformity Rule, an ongoing interagency consultation process is being used for conducting regional emissions analyses and demonstrating conformity for the 8-hour ozone standard. The documentation contained in this analysis demonstrates that the criteria specified in the federal transportation Conformity Rule for a conformity determination are satisfied for the Dorsey Drive Interchange and Squirrel Creek Bridge project.

Conformity Rule Requirements

Section 93.109(l) of the Conformity Rule addresses regional conformity tests in isolated rural non-attainment and maintenance areas. As included in that section, the following provisions of the Transportation Conformity Rule apply to the Dorsey Drive Interchange Regional Emissions Analysis: latest planning assumptions (93.110), latest emissions model (93.111) and consultation (93.112). Additionally, the Dorsey Drive Interchange Project is subject to the interim emissions test since the area was never designated non-attainment for the 1-hour ozone NAAQS and there is no currently approved or adequate mobile source emissions budget for the 8-hour ozone standard. While the Transportation Conformity Rule identifies a number of other requirements for conformity determinations in rural non-attainment areas, they are not applicable for this

conformity determination. First, there is no applicable State Implementation Plan (SIP) with transportation control measures (TCMs). Therefore, the timely implementation of TCMs is not applicable. The other requirements (93.116 and 93.117) apply only in PM₁₀, PM_{2.5} and CO non-attainment and maintenance areas.

Conformity Test Requirements

Under the existing Conformity Rule, regional emissions analyses for ozone areas must address ROG and NO_x precursors. The test used can be either the No-Greater-than-2002 baseline year test or action/baseline test for 8-hour conformity when 8-hour ozone emission budgets are not available. Areas will need to determine the modeling analysis years that apply for the 8-hour standard. The requirements for the analysis year are included in 40 CFR 93.119(g). The first analysis year must be no more than five (5) years from the year the conformity determination is being made. Since the attainment year is within the first five (5) years, once the transportation modeling is complete, the 8-hour ozone non-attainment area will have models completed so that the attainment demonstration SIP budget for the isolated rural non-attainment area can be established. Additional analysis years include the last year of the transportation plan's forecast period and any year such that the analysis years are no more than ten (10) years apart. The area must then calculate emissions for the analysis years for both the existing and planned transportation system. The last year of the *2005 Nevada County Regional Transportation Plan* forecast period is 2027.

The motor vehicle emissions budgets for ROG and NO_x in tons per average summer day were not available at the time this regional emissions analysis was prepared and the interim No-Greater-than-2002 test was utilized. By June 15, 2007, the emission budgets will be developed by the Northern Sierra Air Quality Management District (NSAQMD) in coordination with NCTC as part of the development of the 8-Hour Ozone Attainment Demonstration SIP for Western Nevada County Plan.

Table 1
Conformity Test Utilized by Pollutant and Precursor

	Interim Emissions Test Applied	Budget Test Applied
Pollutant: Ozone	X	
Precursor: Nitrogen Oxides (NO _x)	X	
Precursor: Reactive Organic Gases (ROG)	X	

Conformity Analysis Years

The analysis years to be used in the Conformity Analysis were reviewed and accepted by the Western Nevada County Conformity Working Group as part of the interagency consultation process. In compliance with the conformity test requirements the analysis years selected for interim No-Greater-than-2002 regional emissions tests were 2008, 2018 and 2027.

CHAPTER 2

LATEST PLANNING ASSUMPTIONS

The Final Rule adopted on July 1, 2004, allows conformity determinations to be based on the latest planning assumptions that are available at the time the Conformity Analysis begins. The interagency consultation process should be used to determine the time the Conformity Analysis begins.

In accordance with the Conformity Rule, the interagency consultation process is being used for conducting regional emissions analyses and demonstrating conformity for the 8-hour ozone standard. Through this process the Western Nevada County Conformity Working Group was established. This group is made up of representatives from the NCTC, NSAQMD, Caltrans, the California Air Resources Board (CARB), EPA, FHWA, and the Federal Transit Administration (FTA). The interagency consultation meeting held on June 16, 2005 marked the beginning of the development of the Dorsey Drive Interchange Conformity Analysis. On March 20, 2006, the Western Nevada County Conformity Working Group met and approved the use of the interim emissions test, analyses years, NCTC model assumptions, listed regionally significant projects, projects exempt under 40 CFR 93.126 and 93.127, and the general emissions modeling methodology.

This Dorsey Drive Interchange Regional Emissions Analysis is financially constrained and consistent with the design, concept, and scope of the associated environmental document.

The latest adopted planning assumptions available at the time the conformity analysis was started were utilized by the NCTC and Caltrans in developing the Dorsey Drive Interchange Regional Emissions Analysis. The NCTC traffic model and associated planning assumptions for western Nevada County were updated and approved in 2003. PRISM Engineering completed traffic model runs for the 2002 interim test year and the analysis years 2008, 2018, and 2027.

Traffic Modeling

The Nevada County Transportation Commission's (NCTC) adopted traffic model for western Nevada County was developed using the software application Viper/TP+ and calibrated and validated in 2003. The base year for the model is 2002 and the horizon year is 2027. Significant roadways identified to be outside the model coverage area, but within the Western Nevada County Non-Attainment boundary were analyzed offline by Caltrans District 3 to determine the associated VMT by speed bin for the regional emission analysis scenarios.

2000 Census Journey-to-Work Mode Split indicate that transit mode share is less than 1% of the total home based work trips. Given the relatively low population centers and rural character of the county, transit mode share is not expected to increase significantly by 2027, the horizon year of the Regional Transportation Plan and this analysis. There is no transit component in the NCTC travel demand model. Therefore, while there are air quality benefits from transit service and they can be expected to increase, they are not quantified as part of this analysis.

Offline Vehicle Miles Traveled Analysis

Through interagency consultation it was determined that an offline analysis would be required for the following major roadways outside of the NCTC travel demand model coverage area, but still within the Western Nevada County Non-Attainment Area:

- ◆ Bowman Lake Road
- ◆ SR 20 from just east of Bowman Lake Road to the connection with Interstate 80
- ◆ Interstate 80 east of the connection with State Route 20 to just east of Lake Van Norden

To determine the offline VMT for each specific segment of roadway, the number of miles of the segment was multiplied by the most recent daily traffic volumes and then growth factors based on historic trends were utilized to determine the VMT for the analysis years 2008, 2018, 2027. Once the VMT was determined it was added to the model output VMT by speed bin.

Highway Networks

Networks needed to meet the requirements for the Conformity Analysis are for the years 2008, 2018, and 2027. Appendix “B” contains a list of the financially constrained federal and non-federal regional projects used to develop the build transportation networks for 2008, 2018, and 2027 utilized in the Dorsey Drive Interchange Regional Emissions Analysis.

The 2008 transportation network includes the federal and non-federal regional projects that will be constructed by 2008. The 2018 transportation network includes the federal and non-federal regional projects and a southbound on-ramp constructed for the Dorsey Drive Interchange. The 2027 transportation network includes the federal and non-federal regional projects and the complete tight-diamond Dorsey Drive Interchange.

Population and Employment Projections

In accordance with Section 93.110 of the Federal Conformity Rule, the latest estimates of population and employment projections utilized by the NCTC for western Nevada County Conformity Analysis are shown in the table below.

Table 2
Comparison of Socio-Economic and Vehicle Miles Traveled by Model Horizon Years

Analysis Year	*Western Nevada Co. Pop. (Thousands)	*Western Nevada Co. Employment (Thousands)	Daily VMT (Build)
2008	87.19	25.90	5,125,134
2018	101.86	31.87	5,896,667
2027	114.05	37.77	6,480,172

Caltrans Socio-Economic Forecasts for Nevada County 2005-2025. *Population and Employment numbers represent 82% of the County total based on 2000 Census data for western Nevada County.

Air Quality Modeling

In accordance with Section 93.111, the latest approved emission estimation model (EMFAC 2002) was used in the 8-hour conformity determinations. The vehicle registration data included in the EMFAC model was less than five years old at the time the Conformity Analysis was begun.

EMFAC 2002 program requires information describing the distribution of the VMT and speeds by vehicle type. Control totals for VMT and the number of vehicle trips are from the NCTC travel demand model outputs, offline analysis, and EMFAC 2002. Current forecasted estimates of vehicle registrations, age distributions, and fleet mix are developed by CARB based upon vehicle population and registration distributions extracted from the California Department of Motor Vehicles. These data files utilized in the EMFAC 2002 program contain forecasts of vehicle fleet mix by vehicle type, whether the vehicles are equipped with catalytic converters, and whether the vehicle is fueled by diesel fuel or gasoline. These various inputs and distributions by vehicle engine type are used by EMFAC 2002 to determine emission estimates.

State Implementation Plan Measures

There are no committed control measures as there is not an approved SIP for western Nevada County. Until there is an approved SIP, western Nevada County non-attainment area will not have control measures. The western Nevada County 8-Hour Ozone Basic Attainment Demonstration Plan due date is June 15, 2007.

CHAPTER 3

AIR QUALITY MODELING

EMFAC 2002

The EMFAC 2002 emissions model was used to estimate the emissions for ozone precursors. The Conformity Rule requirements for the selection of the horizon years are summarized in Chapter 2. Consultation on the general air quality modeling methodology applied was conducted by the Western Nevada County Conformity Working Group on June 16, 2005 and March 20, 2006.

Summary of Procedures for Regional Emissions Estimates

Step-by step air quality modeling procedures, including instructions, references and controls for the Dorsey Drive Interchange Regional Emissions Analysis are available on the Fresno Council of Government website at http://www.fresnocog.org/aq-modeling/mcc_aqcm.htm. In addition, documentation of the Dorsey Drive Interchange Regional Emissions Analysis is provided in Appendix “C”, including:

- ◆ VMT by Speed Bin
- ◆ EMFAC 2002 Emission Outputs by Analysis Years

Table 3
EMFAC 2002 No-Greater-than-2002 Emission Test Results

OZONE PRECURSOR		
Test/Analysis Years	NOx (tons per day)	ROG (tons per day)
2002	9.72	2.90
2008	5.30	1.58
2018	2.10	0.59
2027	1.09	0.30

EMFAC 2002 (Summer Runs)

A regional emissions analysis was conducted for analysis years 2008, 2018, and 2027 for the pollutant ozone and the precursors ROG and NOx. All analyses were conducted using the latest planning assumptions and emissions models. For the No-Greater-than-2002 test, the Dorsey Drive Interchange project is assumed in the 2018 and 2027 transportation networks. Based on the planned phased construction of the Dorsey Drive Interchange, the 2018 transportation network assumes that only the southbound onramp to SR 20/49 is constructed and open to traffic. The 2027 transportation network assumes the entire Dorsey Drive tight diamond interchange will be constructed and open to traffic. The major conclusions of the Dorsey Drive Interchange Regional Emissions Analysis are:

For ozone, the total ROG and NOx emissions associated with implementation of the project for all years tested (2008, 2018, and 2027), passed the No-Greater-than-2002 test.

- ◆ An emissions budget has not been established; therefore the No-Greater-than-2002 test was conducted and passed for ozone in relation to the Dorsey Drive Interchange. The emissions analysis was performed using the latest planning assumptions and emission model.

- ◆ Since western Nevada County Interagency Consultation Procedures have not been approved by EPA, consultation has been conducted in accordance with federal requirements. By following the Draft Interagency Consultation Procedures that have been developed, this effort satisfies all the parties in the Western Nevada County Conformity Working Group.
- ◆ Consultation has been conducted in accordance with Federal requirements.

After reviewing the scope and location of the **Squirrel Creek Bridge Project** at Valley Drive, the Western Nevada County Conformity Working Group made the determination that the project is not located on a regionally significant roadway and therefore per 40 CFR 122(a)(1) this project is not required to be explicitly modeled and the VMT from the project have been estimated in accordance with reasonable professional practice. Per 40 CFR 93.119(g)(2), the transportation projects and planning assumptions in the “Action” and “Baseline” scenarios are exactly the same for all possible analysis years, and consequently, the emissions predicted in the “Action” scenario are not greater than the emissions predicted in the “Baseline” scenario for such analysis years. Therefore, this project satisfies the Conformity Rule requirements without additional regional emissions analysis.

CHAPTER 4

INTERAGENCY CONSULTATION

The requirements for consultation procedures are listed in the Conformity Rule under Section 93.105. Consultation is necessary to ensure communication and coordination among air and transportation agencies at the local, State and Federal levels on issues that would affect the Conformity Analysis, such as the underlying assumptions and methodologies used to prepare the analysis. Section 93.105 of the Conformity Rule notes that there is a requirement to develop a conformity SIP that includes procedures for interagency consultation, resolution of conflicts and public consultation as described in paragraphs (a) through (e). Section 93.105(a)(2) states that prior to EPA approval of the conformity SIP, “MPOs and State departments of transportation must provide reasonable opportunity for consultation with State air agencies, local air quality and transportation agencies, DOT and EPA, including consultation on the issues described in paragraph (c)(1) of this section, before making conformity determinations.”

A summary of the interagency consultation conducted to comply with these requirements is provided below. Interagency consultation on the Dorsey Drive Interchange Regional Emissions Analysis is documented in Appendix “D”.

Interagency Consultation

Consultation is generally conducted through the Western Nevada County Conformity Working Group. This group is made up of representatives from the NCTC, NSAQMD), Caltrans, CARB, EPA, FHWA, and FTA. The Western Nevada County Conformity Working Group has been established by the Nevada County Transportation Commission to provide a coordinated approach to the western Nevada County air quality, conformity, and transportation related issues. The Working Group’s goal is to ensure coordination, communication and compliance with Federal and State Clean Air Act requirements. The Western Nevada County Conformity Working Group meets as often as needed, but not less frequently than semi-annually unless there is consensus among the members to meet less frequently, but not less than annually.

An interagency consultation and coordination process outlining the responsibilities of the multiple agencies involved was developed to ensure the coordination of transportation planning and air quality conformity efforts and compliance with Federal and State Clean Air Act requirements. The interagency consultation meeting held on June 16, 2005 marked the beginning of the development of the Dorsey Drive Interchange Conformity Analysis. On March 20, 2006, the Western Nevada County Conformity Working Group met and approved the use of the interim emissions test, analyses years, NCTC model assumptions, listed regionally significant projects, projects exempt under 40 CFR 93.126 and 93.127, and the general emissions modeling methodology. The *Draft Western Nevada County 8-Hour Ozone Regional Emissions Analysis for the Dorsey Drive Interchange and Squirrel Creek Bridge Projects* was originally distributed to the Western Nevada County Conformity Working Group in July 2006 for review.

An interagency consultation meeting was also held on September 21, 2006 to review the *Revised Draft Western Nevada County 8-Hour Ozone Regional Emissions Analysis for the Dorsey Drive Interchange and Squirrel Creek Bridge Projects* to provide a clear understanding of the reason for changing to the No-Greater-than-2002 test, the analysis results, and the recirculation of the revised document for public comment. The revised draft regional emissions analysis was provided to the working group on September 1, 2006. No comments were received from the Working Group during the thirty-day comment period.

Public Consultation

In general, agencies preparing regional emissions analysis for the purpose of demonstrating conformity shall establish a proactive public involvement process that provides opportunity for public review and comment.

Originally, the *Draft Western Nevada County 8-Hour Ozone Regional Emissions Analysis for the Dorsey Drive Interchange and Squirrel Creek Bridge Projects* was circulated to the NCTC agenda packet mailing list and a public hearing was held by NCTC at their regularly scheduled meeting on July 19, 2006. A legal ad was placed in The Union newspaper providing notification of the public hearing to initiate the public comment period and the draft document was available for review and comment at the Grass Valley Public Library, Madelyn Helling County Library, the NCTC Office, and available on the NCTC website. No comments were received during this period. The public consultation review period was held from July 19, 2006 through August 17, 2006 in accordance with the thirty day minimum comment period requirement.

During this review period, an input error was identified in the *Emissions Factor (EMFAC)* modeling, and as a result the 2018 “build scenario” needed to be re-calculated. After correcting the error it was determined that the emissions in 2018 were close to the action/baseline test thresholds. Therefore, in accordance with Federal guidelines which allow the use of either of two emission comparison tests, the alternative No-Greater-than-2002 test was utilized to determine whether or not western Nevada County would be in conformance with the required emission standards.

This test demonstrated that western Nevada County conforms to the required federal standards and that the emissions from the proposed projects and the regionally significant federal and non-federal transportation projects are not greater the 2002 ozone precursor emissions.

Because the emissions analysis had been revised it was necessary to open a second thirty-day public comment period. The public comment period for the revised document began on September 2, 2006 and ended October 4, 2006. A legal ad was placed in The Union newspaper on September 2, 2006, providing notification of the public hearing on the revised regional emissions analysis that was held at the regularly scheduled September 20, 2006 NCTC meeting to provide an additional opportunity for public comment. No comments were received from the public at the hearing or during the thirty-day period. The legal ad also provided notification that the revised draft document was available for review and comment at the Grass Valley Public Library, Madelyn Helling County Library, the NCTC Office, and available on the NCTC website. At the conclusion of the public comment period, NCTC staff provided the final document to Caltrans for their review and submittal to the Federal Highway Administration and Federal Transit Administration for approval.

Public consultation procedures from the *Draft Western Nevada County Interagency Consultation Procedures* has been excerpted and included in this document as follows:

Public Consultation Procedures

- 6.1. NCTC and the Conformity Working Group will follow a public involvement process consistent with Federal planning and project approval requirements as applicable to isolated rural non-attainment areas. The preparation of a Regional Emissions Analysis will include a process to provide at a minimum a 30-day period for public review and comment.

- 6.2. Meetings of the Conformity Working Group are open to the public. Public notice of Conformity Working Group meetings will be posted at the site of the meeting, and will also be made available, at minimum, at the Nevada County Transportation Commission.
- 6.3. Additional public notice will be provided, based on normal local agency public information procedures, for meetings related to specific transportation projects.
- 6.4. Any charges imposed for public inspection and copying should be consistent with the adopted fee schedules per local agency procedures.
- 6.5. The project sponsor will respond, in writing, to all significant comments on a regional conformity analysis, whether by Conformity Working Group members, other agencies or the public.
- 6.6. Caltrans, or the regionally significant project sponsor, will specifically address, in writing, all public comments that known plans for a regionally significant project which is not receiving FHWA or FTA funding or approval have not been properly reflected in the emissions analysis supporting a proposed conformity finding. A decision as to who will respond will be decided through consensus of the Conformity Working Group.